

IN THE SPECIFICATION:

Please amend the specification as follows:

[0004] ~~However, a well-performing~~ A hydrodynamic bearing ~~will~~ may center the shaft at operating speeds, potentially eliminating contact of the bearing outer race with the bearing support housing. In the absence of contact, the bearing outer race will spin and potentially gall as the race intermittently contacts the bearing housing. This spinning and galling of the bearing outer race can lead to part failure.

[0006] A bearing cup apparatus for use with a bearing is provided. In one ~~preferred~~ disclosed embodiment, the apparatus includes a ring and a shoulder extending radially inward from an inner surface of the ring. At least one tang extends axially outward from a first side of the ring. At least one tooth extends axially outward from a second side of the ring opposite the first side. At least one slot is formed in the second side. The apparatus prevents the outer race of a conventional rolling element bearing from rotating while allowing the bearing to move in an axial direction. The apparatus can be readily used with either a single rolling element bearing, a set of two bearing assemblies, or any number of closely spaced bearing assemblies. The advantage of the apparatus is that it eliminates spinning of the bearing assembly outer race. The apparatus also prevents frictional sliding between a bearing assembly outer race and a preload spring. Frictional sliding imposed on a bearing outer race can induce galling and subsequently lead to part failure.

[0015] The following description of the ~~preferred~~ disclosed embodiment(s) is merely exemplary in nature and is in no way intended to limit the invention, its application, or uses.

[0018] Turning to Figures 2 and 3, the bearing assembly 10 is illustrated in greater detail. In one ~~preferred~~ disclosed embodiment, the bearing assembly 10 includes a first bearing 30, a first bearing cup 32, a second bearing 34, a second bearing cup 36, a spring 38, and a shim 40. The first and second bearings 30, 34 and the first and second bearing cups 32, 36 are substantially identical. Accordingly, only the first bearing 30 and first bearing cup 32 will be

described in detail, it being understood that the detailed description applies equally to the second bearing 34 and second bearing cup 36, respectively. In this regard, the various components of the second bearing 34 and second bearing cup 36 will be designated with the number of the component corresponding to the first bearing 30 and the first bearing cup 32 followed by a “ ’ ” symbol.

[0022] A shoulder 66 is formed on the inner surface 56 adjacent the rear side 52 and extends radially inward. The shoulder 66 is sized to accommodate the spring 38 as will be described below. Moreover, the bearing cup 32 can have lubricated surfaces to reduce sliding friction. The bearing cup surfaces in contact with the outer race 42 are not lubricated in the ~~preferred-disclosed~~ configuration.

[0023] The bearing cup 32 is sized to fit over the outer race 42 of the first bearing 30. The inner diameter of the inner surface 56 of the first bearing cup 32 is smaller than the outer diameter of the outer race 42 such that the bearing cup 32 is press fitted onto the bearing 30 thereby creating an interference fit between the two. In ~~the one preferred-disclosed~~ embodiment, the bearing cup 32 is constructed from a high strength steel, although various other materials may be employed.

[0027] As best seen in Figure 3, the first and second bearing cups 32, 36 engage one another. The teeth 62 of the first bearing cup 32 fit within the slots 64' of the second bearing cup 36 while the teeth 62' of the second bearing cup 36 fit within the slots 64 of the first bearing cup 32. In the ~~preferred-disclosed~~ embodiment, the slots 64, 64' are wider than the teeth 62, 62' thereby creating a gap, indicated by reference numeral 72. This allows the bearing cups 32, 36 to rotate slightly before locking each other from further rotation.